



# AOC WEAPON SYSTEM UPDATE

This briefing is  
**UNCLASSIFIED**

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AC2ISRC/A3



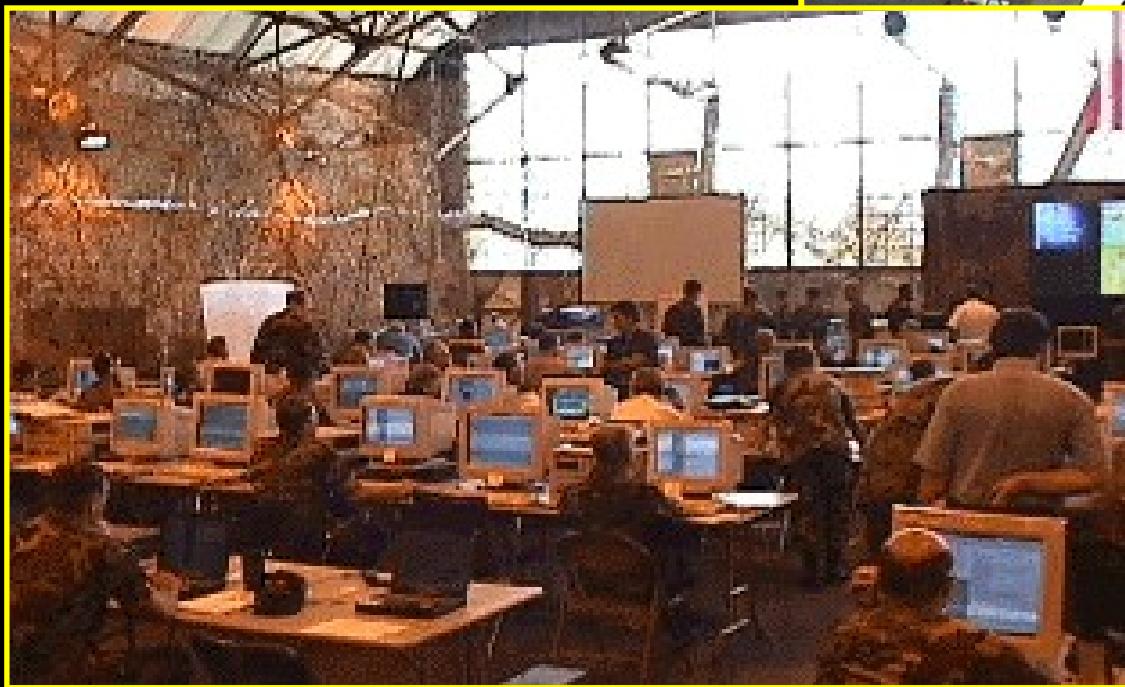
# PURPOSE

- **AOC Weapon System Corona briefing covered DOTMLP**
- **This briefing will provide an update on efforts to improve the AOC Weapon System**
  - **What is the AOC**
  - **CONOPS: As-Is and To-Be**
  - **Ops Architecture: As-Is and To-Be**
  - **ESC produced AOC CONOPS model**
  - **Results of 25 Oct 00 AOC SDIPT**
  - **CAOC-X equipment and manpower**
  - **Manning concepts and training**



# THE AOC: WHAT IS IT?

Extract fm COMACC  
Corona Brief





# AOC DEFINITION

- Personnel, equipment, and capabilities through which JFACC commands and controls aerospace forces
  - Centralized control / decentralized execution
  - Effects based
- Characteristics
  - Professional - trained, dedicated personnel
  - Standardized - equipment, applications, processes

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Corona Brief

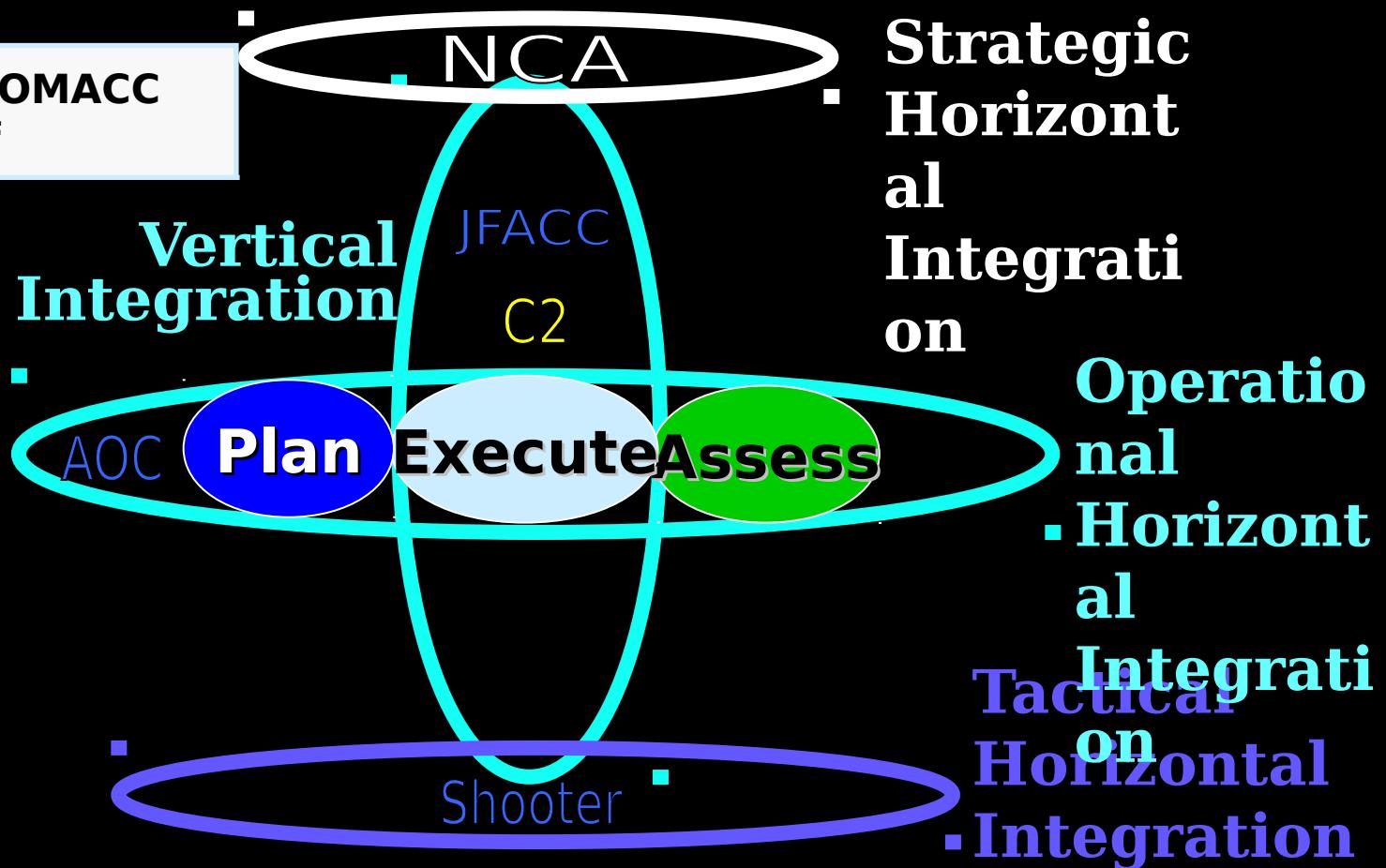
The Science of Control  
to Enable the Art of Command



# AOC FUNCTIONS

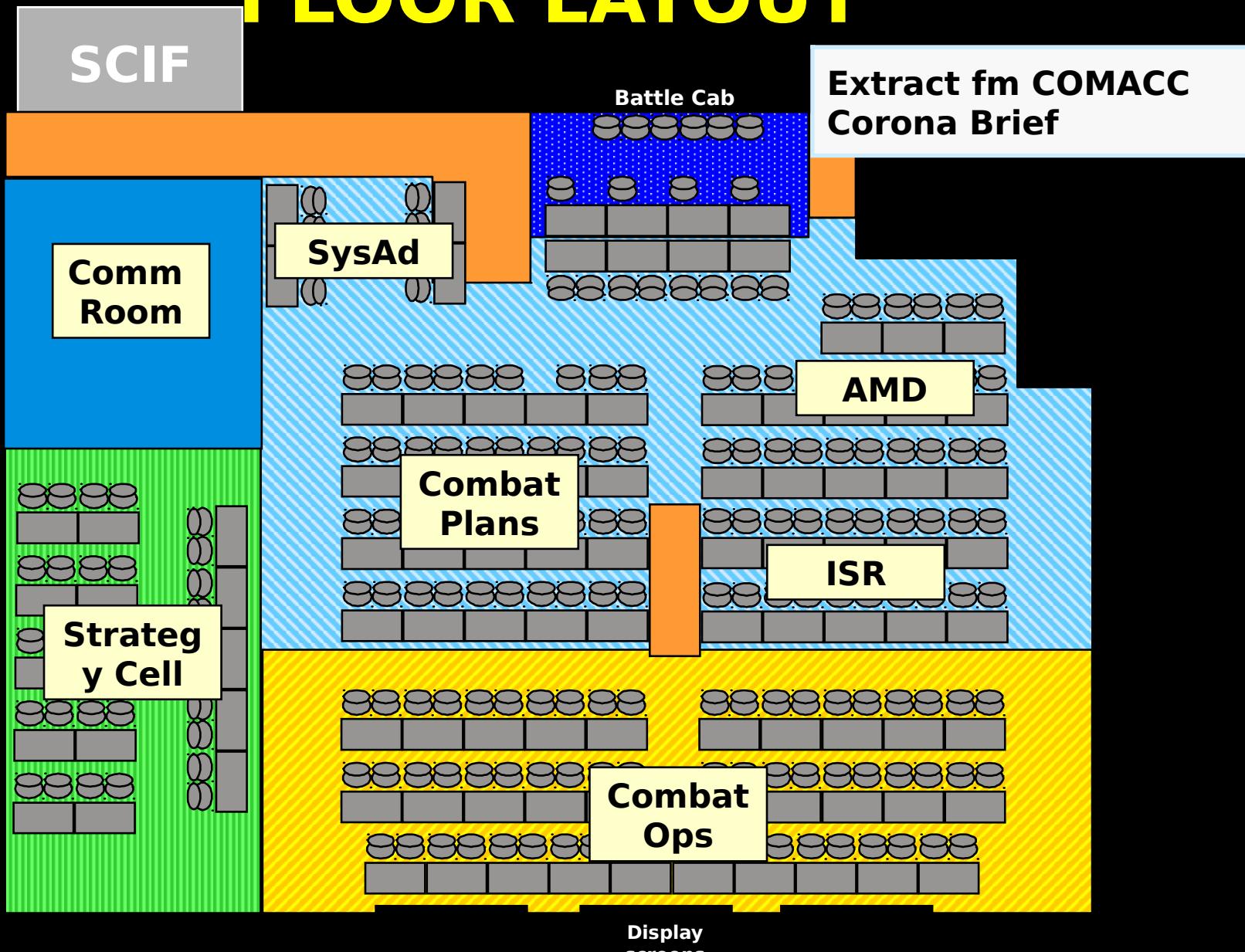
- Planning, Execution, and Assessment
- Vertically and Horizontally Integrated

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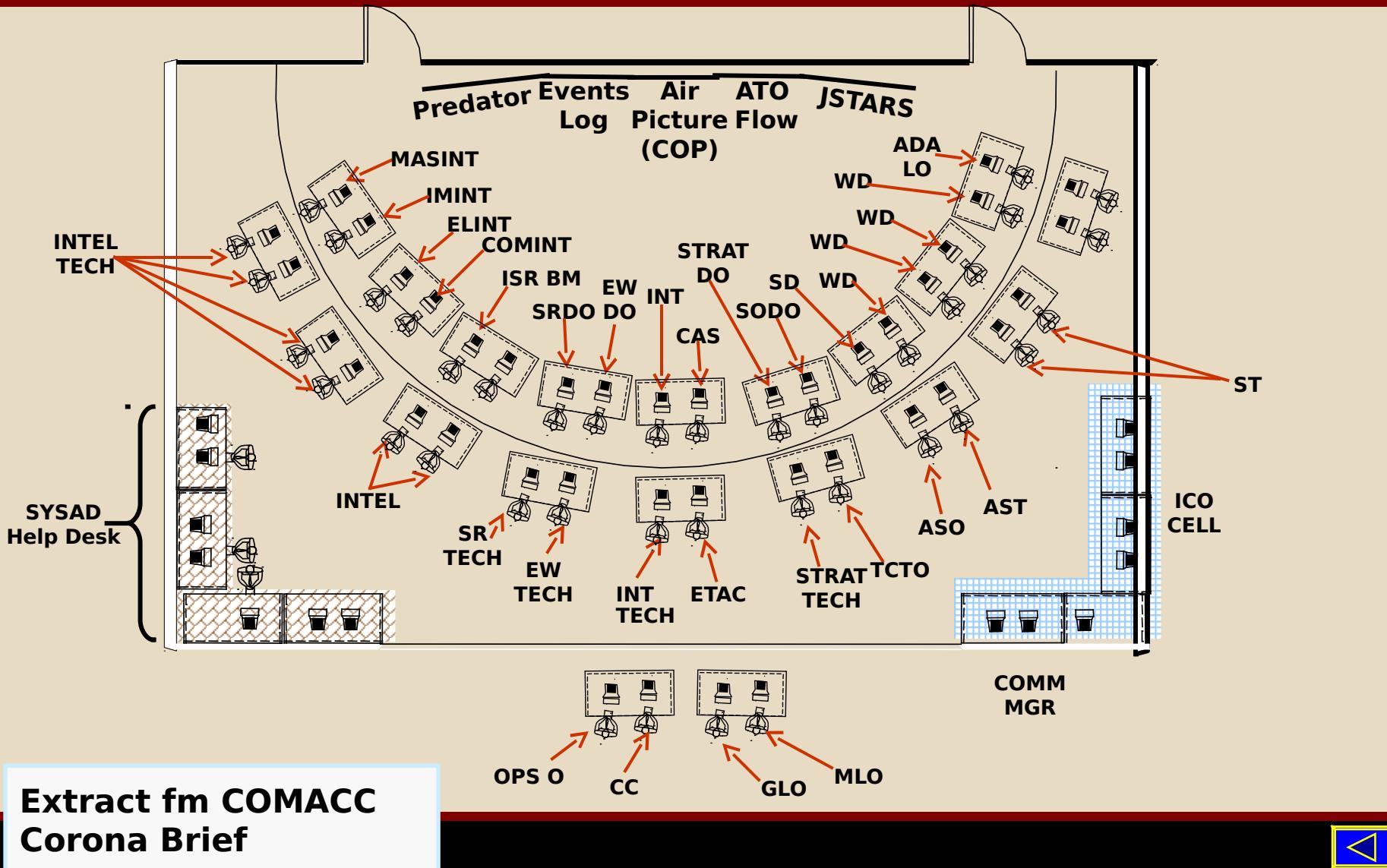


# NOTIONAL AOC FLOOR LAYOUT





# NOTIONAL AOC LAYOUT



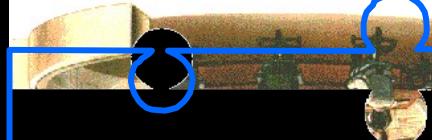


# AOC WPNS SYSTEM OVERVIEW

CONOPS



ARCHITECTURES



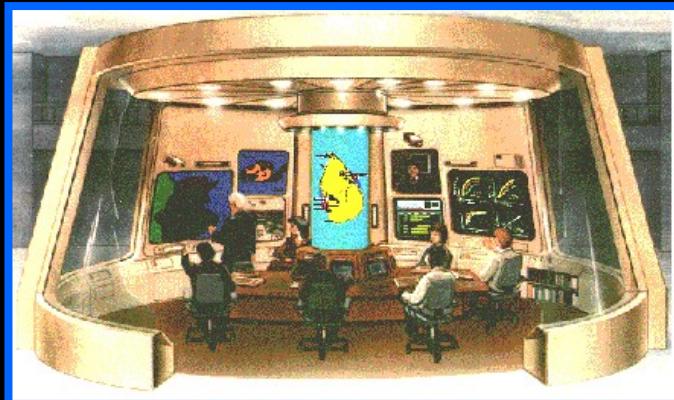
AOC  
MODEL



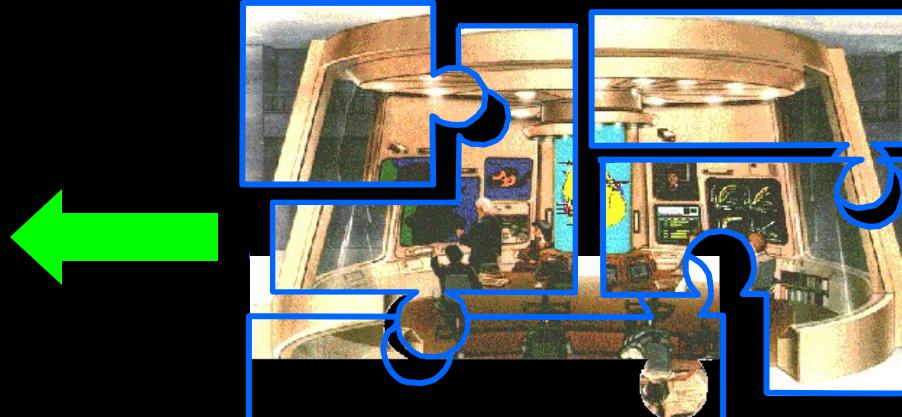
SPIRAL  
DEVELOPMENT  
IPT



CAOC-X



WARFIGHTING  
CAPABILITY





# CONOPS EFFORTS

CONOPS

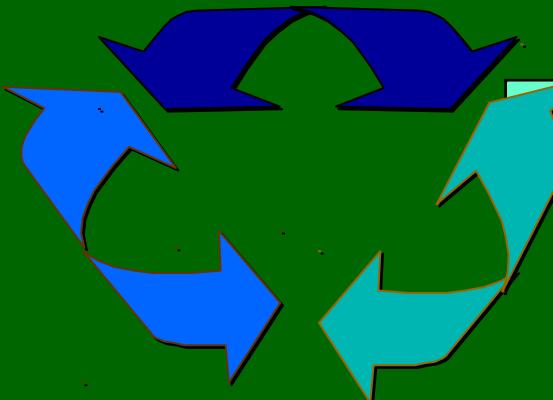
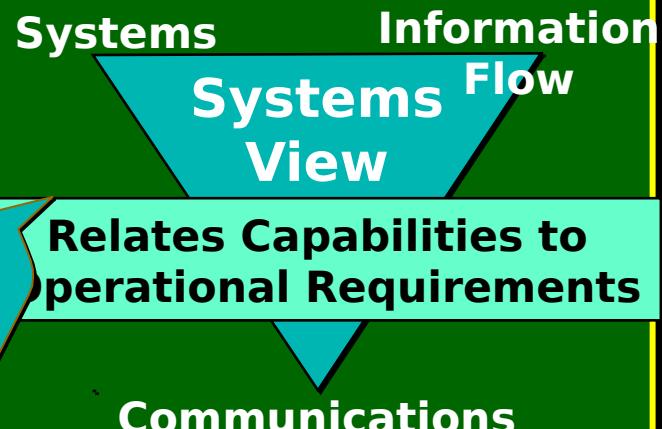
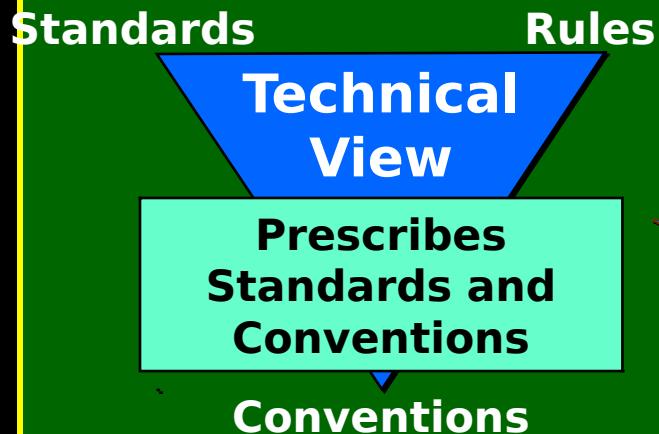


- AF C2&ISR CONOPS
  - “As-Is” in MAJCOM two-digit coordination
  - “To-Be” in draft, MAJCOM conference Nov 00
- Theater Air Control System CONOPS
  - Final draft due 29 Nov 00
- AF AOC CONOPS
  - Out for MAJCOM/CC coordination
- CAF CONOPS for Integration of C2&ISR
  - In MAJCOM two-digit coordination
- CAF CONOPS for C2 Against Time Critical Targets
  - Approved 97
  - To be updated 1 Qtr CY01



# DEVELOPMENT PROCESS FOUNDATION (AFI 33- CONOPS 124)

**One  
Architecture-  
Three Views**





# 'AS-IS' OPERATIONAL ARCHITECTURE

ARCHITECTURES



- Version 1.0 (Theater Focus) - Released Aug 00
- AF theater C2&ISR nodes
  - High-level activities and major information exchanges
  - MTW focus, 2000-2004 timeframe
  - Products: AV-1/2, OV-1/2/3/4 (6-page brochure and CD)
  - Includes AOC Functional Decomposition
  - Defines As-Is AOC Activities in more detail
    - NAF review/validation underway
    - ESC TBMCS architecture office reviewing



# OPS VIEW-1 AF THEATER C2&ISR SYSTEM

Reachback  
Support

OV-1

National Nodes  
Multinational Nodes  
Joint Nodes  
AF Global Nodes (DCGS etc.)  
Nodes From Other Theater

Support Requests





# 'TO-BE' OPERATIONAL ARCHITECTURE

ARCHITECTURES



- **First Increment—Due 8 Dec 00**
- **AF theater C2&ISR capabilities**
  - High-level activities and major information flows
  - **MTW focus, 2005-2013 timeframe**
  - **“Evolved” from As-is Activities Using Critical Capabilities as a guide**
  - **Products: AV-1/2, OV-1/2/3**



# AOC EXECUTABLE MODEL

AOC  
MODEL

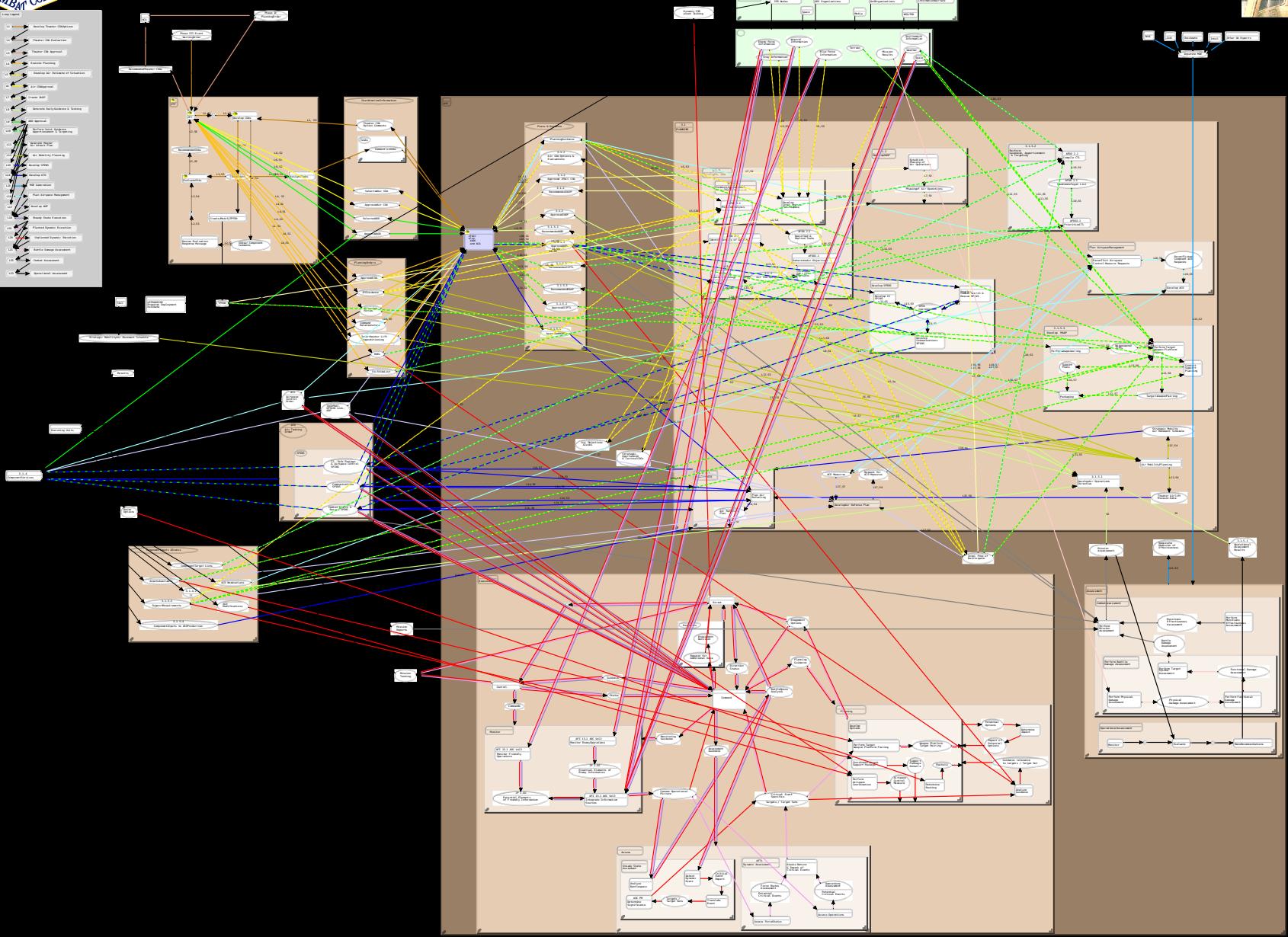


- ESC built executable model of AOC
  - Process based - models AOC CONOPS
  - Now matching model to ops architecture
  - Next align systems architecture to ops architecture
  - Will identify holes, bottlenecks, and redundancies



# AOC EXECUTABLE MODEL

AOC  
MODE





# AOC SDIPT

SPIRAL  
DEVELOPMENT  
IPT



- CAOC-X Phase I baseline agreed on
  - Primarily Desert Shift support
- AOC Baseline established
  - Common baseline of equipment with theater specific “extensions”
- Voting membership
  - Users, developers, testers
  - MAJCOM O-6 level



# CAOC-X

CAOC-X



- **Capabilities based, must address an operational need**
  - Collaborative C2 Centers
  - NATO and Coalition interoperability
  - Reduced planning time
  - ISR battle management
  - Reduced forward footprint
  - Predictive Battlespace Awareness
  - Time Critical Targeting

## Contributors

**AFMC**

**AFRL**

**ACC**

**AC2ISRC**

**AFSPC**

**AMC**

**497<sup>th</sup> IG**

**USAFE**

**ESC**



## Assessment of current toolset

### CAOC-X systems

	PLAN			EXECUTE		ASSESS				
	STRATEGY	GAT	MAAP	ATO PRODUCTION	FIXED TARGET	PLANNED DYNAMIC	TIME CRITICAL TARGETS	OPERATIONAL ASSESSMENT	COMBAT ASSESSMENT	PROCESS ASSESSMENT
TBMCS				✓	✓	✓				
Master Battle Planner		✓	✓	✓						
Joint Targeting Toolkit	✓						✓	✓	✓	✓
ISRBMs	✓					✓	✓	✓	✓	✓
XML ATO				✓	✓	✓	✓			
Coal Warfighter	✓				✓	✓	✓	✓	✓	✓
Broadsword	✓				✓	✓	✓	✓		
J FACC Cockpit	✓					✓	✓	✓		
IWS	✓	✓	✓		✓	✓	✓	✓		✓
ELVIS II					✓	✓	✓	✓		
SBMCS		✓	✓	✓	✓			✓		
NATO ICC										

Current capability adequate  
Current capability limited  
Currently no integrated toolset

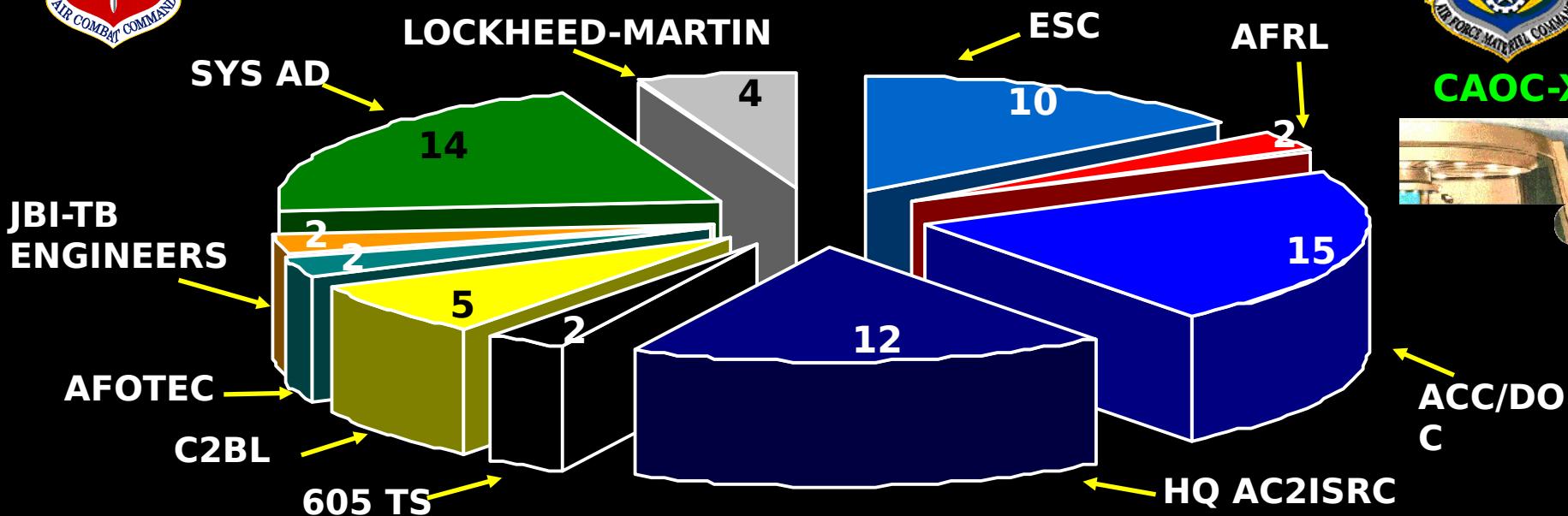
Checkmarks indicate applicability to processes



# CAOC-X MANPOWER



CAOC-X



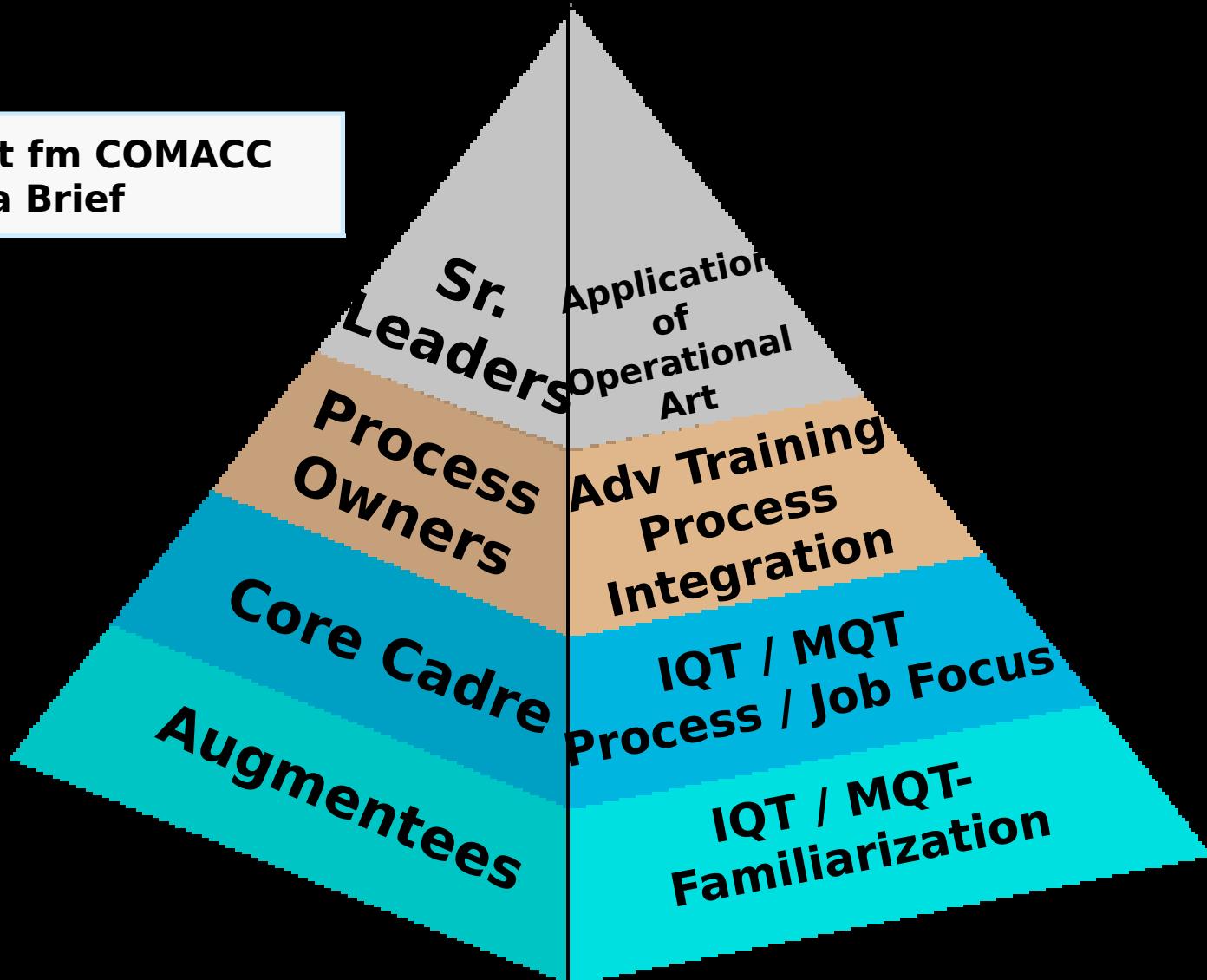
- ESC
  - AFRL
  - ACC/DOC
  - HQ AC2ISRC
  - 605 TS
  - C2BL
  - AFOTEC
  - JBI-TB ENGINEERS
  - SYS AD
  - LOCKHEED-MARTIN
- TOTAL**

	OFFICER	ENLISTED	CONTRACTOR	TOTAL
ESC	2	10	0	8
AFRL	0	2	0	2
ACC/DOC	2	15	1	12
HQ AC2ISRC	6	12	1	5
605 TS	1	2	0	1
C2BL	5	5	0	0
AFOTEC	1	2	0	1
JBI-TB ENGINEERS	4	2	0	1
SYS AD	5	5	0	0
LOCKHEED-MARTIN	1	2	0	1
<b>TOTAL</b>				



# MANNING CONCEPTS & TRAINING

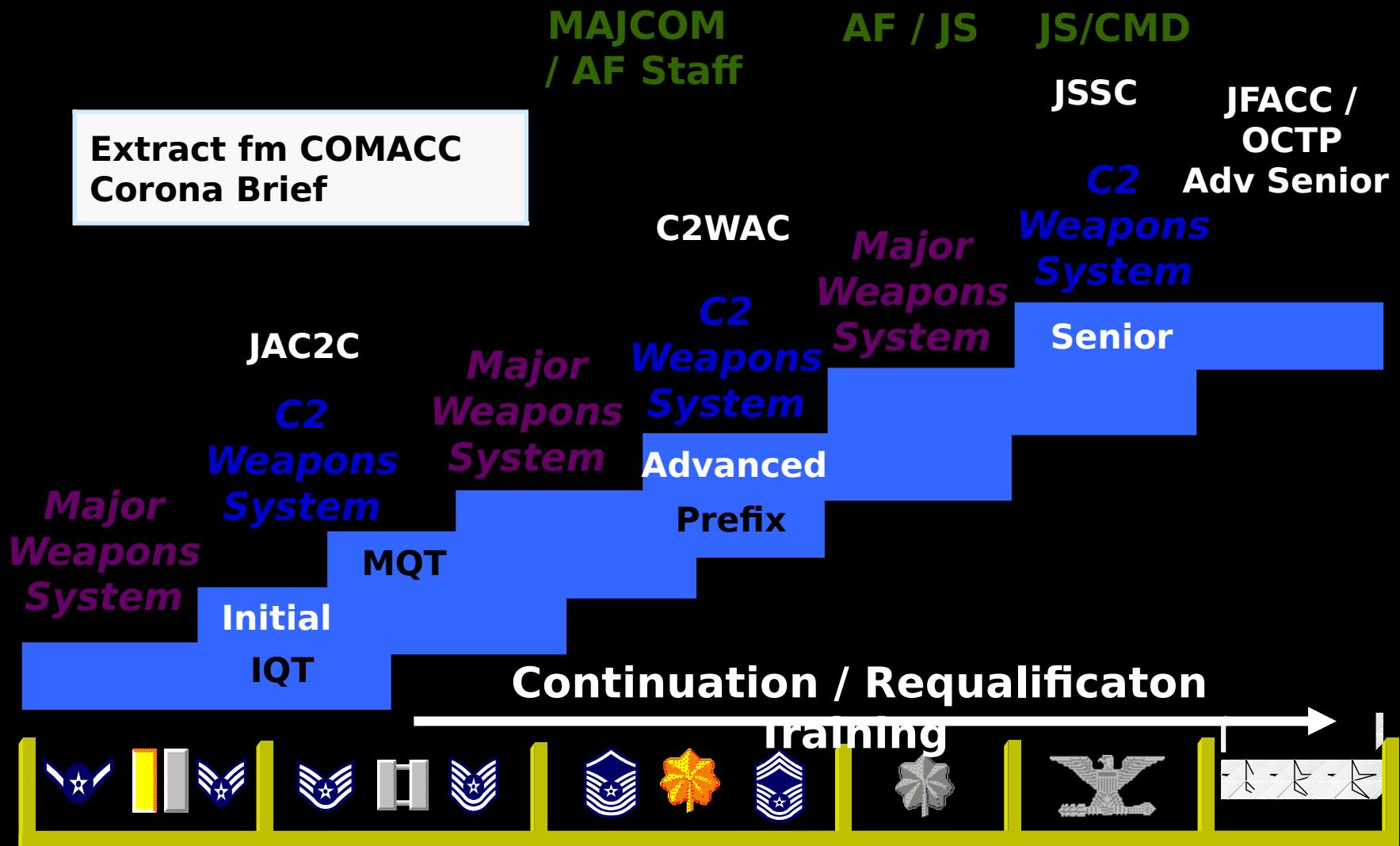
Extract fm COMACC  
Corona Brief





# Training C2 Career Path

DOTML-P





Extract fm COMACC  
Corona Brief

# Training C2 Pipeline

DOTML-P

Air Crew Course	AOC Equivalent	Qualification	Status
UPT		AFSC Awarding	N/A
RTU	JAC2C	IQT	
Unit	NAF Positional Check Out	MQT / CT	
Mission Cmdr / IP C2WAC		Instructor	
	JSSC	Senior Training	
	JFACC/C	Adv Senior Trng	

**JAC2C trains 55% of the users on 20% of the IQT requirements.**

C2WAC - C2 Warrior Advanced Course  
Senior Staff Course

JFACC/C - Joint Forces Air Component Commander Course  
C2 Course

JSSC - Joint Air Operations

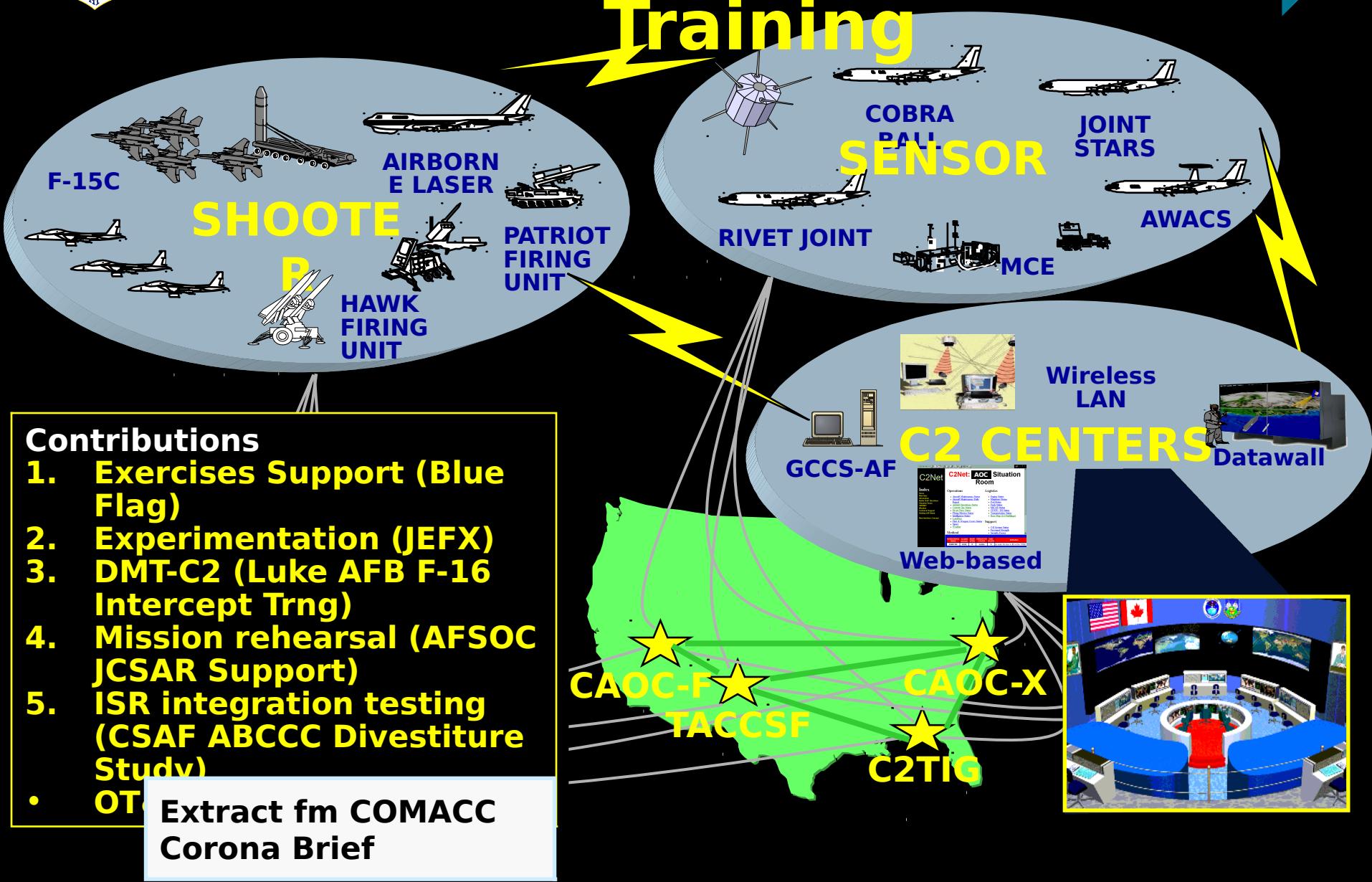
JAC2C - Joint Aerospace



# Training

# Distributed Mission Training

NOTML-P





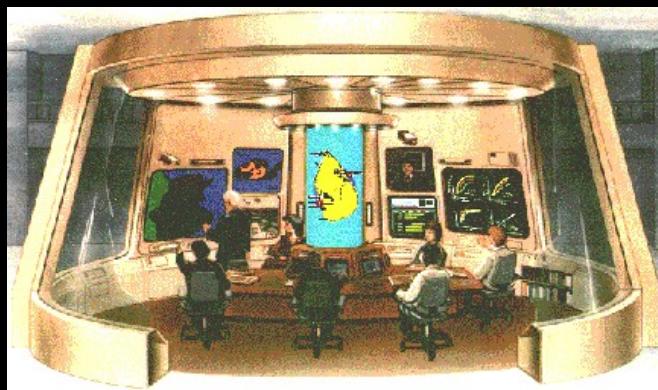
# ISSUES

- Funding
- Manning
- Continue to match system architecture to ops architecture and fold into process model



# SUMMARY

- CAOC-X is the path ahead
- Still working multiple issues



**WARFIGHTING  
CAPABILITY**





# CAOC-X



CAOC-X



- **Capabilities based, must address an operational need**
  - Collaborative C2 Centers
  - NATO and Coalition interoperability
  - Reduced planning time
  - ISR asset management
  - Reduced forward footprint
  - Predictive Battlespace Awareness
  - Time Critical Targeting
- **Manning**
  - Operators: ACC/DOC
  - Developers: ESC, industry, battle labs
- **Equipment: need an improved cooperative effort**